

DATA SHEETS

Fume cupboard systems

Radionuclide fume cupboard (DR)



DELTAguard radionuclide fume cupboard (DR)

GENERAL INFORMATION

Fundamental safety and performance targets

The DELTAguard radionuclide fume cupboard is designed in such a way that

- hazardous airborne pollutant concentrations or quantities do not escape from the fume cupboard into the room;
- hazardous substances are efficiently removed to reduce the risk of formation of an explosive or hazardous atmosphere in the interior of the fume cupboard;
- the user is protected against splashing and splinters by a front sash.

- The DELTAguard radionuclide fume cupboards comply with the standards of DIN EN 14175-8:2022-09 and DIN EN 14175 Parts 1-3.

- All radionuclide fume cupboards are subject to prototype testing by an independent aerotechnical test institute. The fume cupboard emissions have all been far under the limit values of BG Chemie. They meet the safety requirements in all respects.

Note:

- Separate types of fume cupboard are available for high thermal loads with acid digestions.

PRODUCT ADVANTAGES

- Fume cupboard for handling unsealed radioactive materials according to DIN EN 14175-8:2022-09
- Fume cupboard tested and certified according to DIN EN 14175-8:2022-09 and DIN EN 14175
- Optimized pollutant retention capacity with simultaneous low exhaust air volume flows
- Maximum usable inner workspace, due to extra-narrow fume cupboard sides
- Maximum visibility through the use of standard top glazing (glass skirting)
- Worktops and interior surfaces according to requirements
- Worktop with moulded, flow-optimized front rim
- Exhaust air system with optimized air intake zones for a full-surface extraction above the work surface
- Ergonomically designed sash handle bar for easy, one-handed operation of the sliding sash with twist-release mechanism
- Maintenance-friendly thanks to large inspection panel, simple-to-disassemble installations and easily replaced worktops
- Electrical panels on both sides of interior
- High installation density possible, no overlap of the service outlet and stand areas
- Standard battery-buffered exhaust air monitoring unit with IR interface
- Integrated function and control panel at eye level in the pilaster, optionally with a graphical OLED function display on which all main operating and status information of the fume cupboard is directly readable (e.g. volume flow, inflow, as well as error and operating messages)
- Rod holder on the rear wall
- Optional: Substructure or hazardous materials/ safety cabinet
- Wide range of accessories and options, such as automatic motorized sash drive, fume cupboard control (with integrated Web server and ECO-efficiency indicator, by means of which the energy demand of the individual mode of operation is determined and represented by averaging in comparison to other fume cupboards networked in the laboratory building)
- Optional: Available with active air-injection system

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TECHNICAL DATA

			Grid			
			1200	1500	1800	2100
Dimensions	Width (outer)	mm	1200	1500	1800	2100
	Depth (outer)	mm	910			
	Height (outer)	mm	2730			
	Width (inner)	mm	1160	1460	1760	2060
	Depth (inner) Standard	mm	710 (690)			
	Height (inner)	mm	1500			
	Weight	kg	351	391	441	492
Interior	Interior surface	Polypropylene (PP)	X			
		Stainless steel (CNS)	O			
	Worktop	Polypropylene (PP)	X			
		Stainless steel (CNS)	O			
	Drip cup	rear right (preferred position)	O			
		rear centre	O			
		rear left	O			
	Rod holder	2 rows	X			
		3 rows		X	X	
4 rows					X	
Front sash	Cross-slide	without	X			
		manual	X			
	Operation	electrical, incl. motion detector	O			
		Design	simple	X		

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		Grid			
		1200	1500	1800	2100
Electrical service outlets	Electrical panels on both sides	in interior, sockets switched outside		O ²	
	System duct	Electrical service outlets		O ²	
Sanitary service outlets	Service fitting points in grid 75 mm	in interior (water, gases, vacuum)		O ²	
	System duct	Front control valves		O ²	
Additional equipment	Substructure	Base cabinet		O	
	Substructure extraction			O	
	Construction material Class B1	flame-resistant		O	

- X Standard
O Optional

- *1 necessary for extinguishing fume cupboards
*2 Media and electrical service outlets freely selectable

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AEROTECHNICAL DATA

Model	Equipment		Grid							
			1200		1500		1800		2100	
			Exhaust air volume Pressure loss							
			m ³ /h	Pa	m ³ /h	Pa	m ³ /h	Pa	m ³ /h	Pa
DELTAguard DR-DG03	Exhaust air monitoring (unregulated)	tested	420	33	525	45	630	40	735	38
		recomm. V min.	480	43	600	59	720	52	840	50
		recomm. V max.	600	68	750	92	900	81	1050	78
DELTAguard + DELTAprotect DR-DG03-P	Exhaust air monitoring (unregulated) Active air-injection system	tested	300	19	375	24	450	23	525	21
		recomm. V min.	360	27	450	35	540	33	650	32
		recomm. V max.	480	48	600	62	720	58	840	54
DELTAguard + DELTAcontrol DR-DG03	Volumene flow regulation (regulated)	tested	420	33	525	45	630	40	735	38
		recomm. V min. ¹	200	5	200	11	200	4	200	3
		recomm. V max. ²	480	43	525	45	720	52	840	50
DELTAguard + DELTAcontrol + DELTAprotect DR-DG03-P	Volume flow regulation (regulated) Active air-injection system	tested	300	19	375	24	450	23	525	21
		recomm. V min. ¹	200	8	200	7	200	5	200	3
		recomm. V max. ²	360	16	375	26	540	33	650	32

¹ Front sash closed

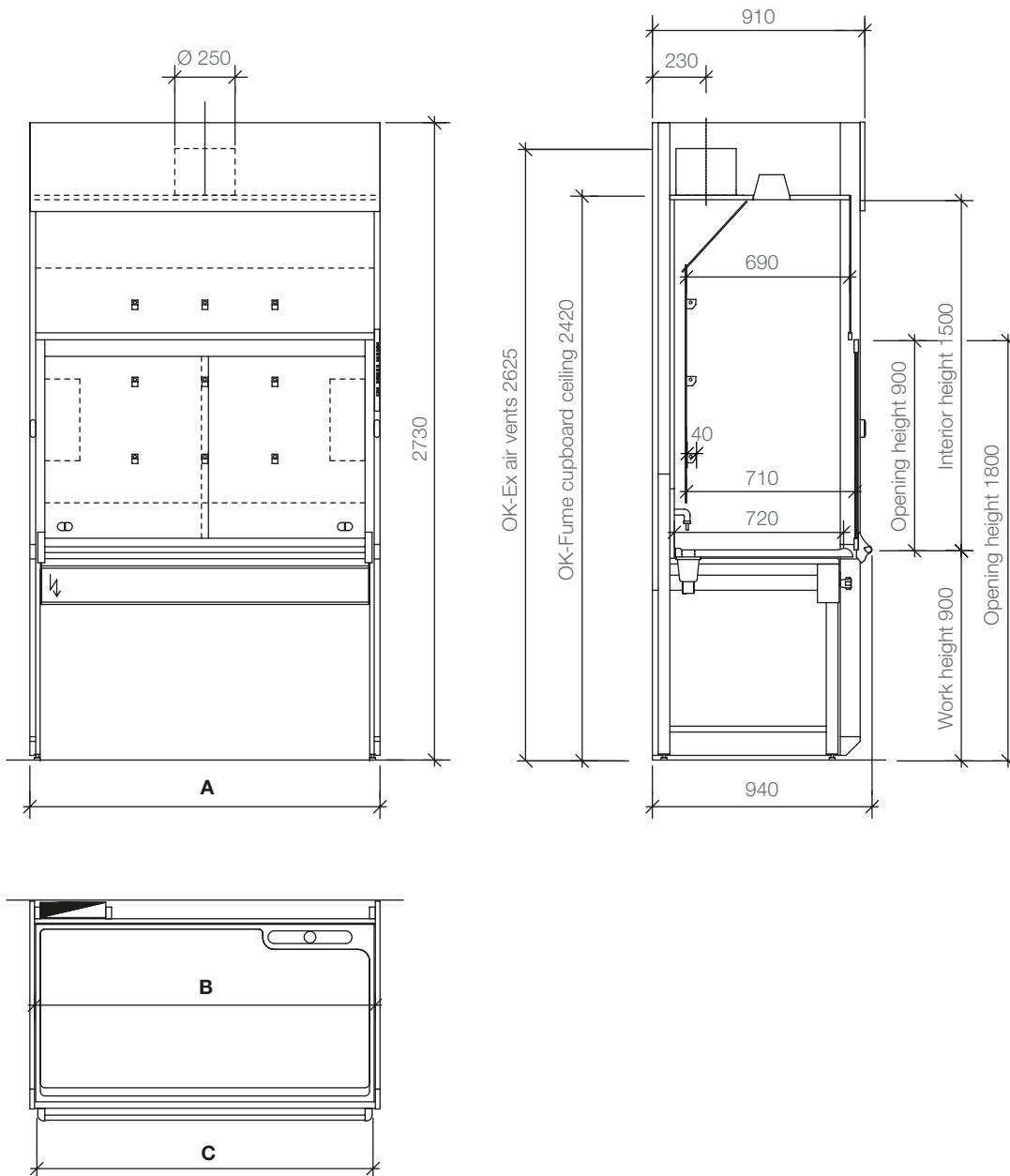
² Front sash open

The tested values are air quantities determined under test room conditions in accordance with DIN EN 14175. Our experience has shown that higher air volumes may be necessary in practice. Therefore the recommended values are sometimes higher.

When designing the ventilation system, please note that respective pressure losses must be taken into account. As a planning value, an average of approx. 100-150 Pa/fume cupboard with regulation can be assumed. An adjustment of the minimum volume flow may be necessary. Our experts will be pleased to provide you with advice and assistance during every phase of the project – talk to us.

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DIMENSIONS EXTERIOR AND INTERIOR



Grid width	A	1200	1500	1800
Interior width	B	1160	1460	1760
Opening width	C	1140	1440	1740

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